

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Colin Whitby-Strevens, et al.

App. No. : 10/735,260

Filed : December 11, 2003

For : **SYMBOL ENCODING FOR  
TOLERANCE TO SINGLE BYTE  
ERRORS**

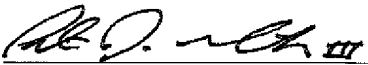
Examiner : Abraham, Esaw T.

Group Art Unit: 2112

**CUSTOMER NO. 65201****CERTIFICATE OF ELECTRONIC  
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May 12, 2010  
(Date)



Peter J. Gutierrez, III  
Reg. No. 56,732

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**AMENDMENT INCLUDING REQUEST FOR CONTINUED EXAMINATION (RCE)**

10 Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

15 Dear Sir:

In response to the Notice of Allowance dated February 17, 2010 ("Notice of Allowance"), the following is provided:

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IN THE SPECIFICATION

1. Please delete paragraph [0015] of Applicant's specification as filed and insert the following text in its place as follows:

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-- The present invention satisfies the foregoing needs by, *inter alia*, adding features to assist robustness in the case of errored arbitration requests, and robustness in the case of bursts of byte errors.

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In accordance with a first aspect of the invention, a method of protecting symbol types transmitted across a communication medium is disclosed. In one embodiment, the method comprises encoding a symbol having a plurality of bits, where the most significant bit and the least significant bit of the symbol indicates a type of the symbol and transmitting the symbol across the communication medium such that the encoding protects symbol types, as a single byte error cannot affect both the most significant bit and the least significant bit of the symbol. In one variant, the symbol is encoded such that the most significant bit is identical to the least significant bit. In another variant, the symbol consists of eight bits. In yet another variant, the symbol type corresponds to either a first type or a second type, wherein if the most significant bit and the least significant bit both comprise a high bit, the symbol type corresponds to one of the first and second type, and if the most significant bit and the least significant bit of the symbol both comprise a low bit, the symbol type corresponds to the other of the first and second types. In yet another variant, the first type comprises a data symbol and the second type comprises a non-data symbol. In yet another variant, a bit adjacent to the most significant bit of the symbol and a bit adjacent to the least significant bit of the symbol are adapted to indicate a symbol subtype. In yet another variant, the symbol subtype comprises one of (i) a control symbol, or (ii) an arbitration request symbol. In yet another variant, at least five bits of the symbol are adapted to indicate a symbol subtype with the five bits not including the most significant bit and the least significant bit. In yet another variant, the communication medium comprises a bus compliant with a high-speed serialized bus protocol. In yet another variant, the high-speed serialized bus protocol comprises at least one of the IEEE Std. 1394b and 1394c standards.

In accordance with a second aspect of the invention, a computerized apparatus for transmitting data across a communication medium is disclosed. In one embodiment, the apparatus includes a first module to encode a symbol with a plurality of bits, wherein the first module indicates a type of the symbol by setting or resetting both a most significant bit and a least significant bit of the symbol and a second module to transmit the encoded symbol across the communication medium. In one variant, the symbol type corresponds to either a first type or a second type, wherein if the most significant bit and the least significant bit of the symbol are both set, the symbol type corresponds to the first type, and if the most significant bit and the least significant bit of the symbol are both reset, the symbol type corresponds to the second type. In another variant, a bit adjacent to the most

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significant bit of the symbol and a bit adjacent to the least significant bit of the symbol indicate a symbol subtype. In yet another variant, bits of the symbol indicate a symbol subtype, where the bits do not include the most significant bit and the least significant bit of the symbol. In yet another variant, the communication medium comprises a bus compliant with a high-speed serialized bus protocol. In yet another variant, the high-speed serialized bus protocol comprises at least one of the IEEE Std.1394b and 1394c standards. --

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IN THE CLAIMS

Please do not amend, cancel or add any new claims. Accordingly, Claims 57 – 73 are presented as follows:

- 5           1. – 56. (Canceled)
57. (Previously presented) A method of protecting symbol types transmitted across a communication medium comprising:
- encoding a symbol comprising a plurality of bits, wherein a most significant bit and a least significant bit of said symbol indicate at least a type of said symbol; and
- 10           transmitting the symbol across the communication medium;
- wherein said encoding protects symbol types, as a single byte error cannot affect both said most significant bit and said least significant bit of said symbol.
58. (Previously presented) The method of claim 57, wherein the symbol is encoded with said most significant bit identical to said least significant bit.
- 15           59. (Previously presented) The method of claim 58, wherein the symbol consists of eight bits.
60. (Previously presented) The method of claim 58, wherein the symbol type corresponds to either a first type or a second type.
61. (Previously presented) The method of claim 60, wherein if said most significant bit
- 20           and said least significant bit both comprise a high bit, the symbol type corresponds to one of the first and second type, and if the most significant bit and the least significant bit of the symbol both comprise a low bit, the symbol type corresponds to the other of the first and second types.
62. (Previously presented) The method of claim 61, wherein said first type comprises a data symbol, and said second type comprises a non-data symbol.
- 25           63. (Previously presented) The method of claim 61, wherein a bit adjacent to the most significant bit of said symbol and a bit adjacent to the least significant bit of said symbol are adapted to indicate a symbol subtype.
64. (Previously presented) The method of claim 63, wherein said symbol subtype comprises one of (i) a control symbol, or (ii) an arbitration request symbol.

65. (Previously presented) The method of claim 61, wherein at least five bits of said symbol are adapted to indicate a symbol subtype, said at least five bits not including said most significant bit and said least significant bit.

5 66. (Previously presented) The method of claim 58, wherein said communication medium comprises a bus compliant with a high-speed serialized bus protocol.

67. (Previously presented) The method of claim 66, wherein said high-speed serialized bus protocol comprises at least one of the IEEE Std. 1394b and 1394c standards.

68. (Previously presented) A computerized apparatus for transmitting data across a communication medium, said apparatus comprising:

10 a first module to encode a symbol comprising a plurality of bits, wherein the first module indicates a type of said symbol by setting or resetting both a most significant bit and a least significant bit of said symbol; and

a second module to transmit the encoded symbol across the communication medium.

15 69. (Previously presented) The apparatus of claim 68, wherein the symbol type corresponds to either a first type or a second type;

wherein if the most significant bit and the least significant bit of the symbol are both set, the symbol type corresponds to the first type, and if the most significant bit and the least significant bit of the symbol are both reset, the symbol type corresponds to the second type.

20 70. (Previously presented) The apparatus of claim 68, wherein a bit adjacent to the most significant bit of said symbol and a bit adjacent to the least significant bit of said symbol indicate a symbol subtype.

71. (Previously presented) The apparatus of claim 68, wherein a plurality of bits of said symbol are adapted to indicate a symbol subtype, said plurality of bits not including the most significant bit and the least significant bit of said symbol.

25 72. (Previously presented) The apparatus of claim 71, wherein said communication medium comprises a bus compliant with a high-speed serialized bus protocol.

73. (Previously presented) The apparatus of claim 72, wherein said high-speed serialized bus protocol comprises at least one of the IEEE Std. 1394b and 1394c standards.

74. – 119. (Canceled)

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REMARKS

Claims 57 – 73 were pending in the application. By this paper, Applicant has not canceled, amended or added any new claims. Accordingly, Claims 57 – 73 are presented for examination herein.

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*Allowable Claims*

As the present response submitted herein is in reply to the Notice of Allowance mailed on February 17, 2010; and as Applicant has not amended or added any new claims, Claims 57 – 73 are in condition for allowance.

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*Request-for Continued Examination (RCE)*

Applicant submits concurrently herewith a request-for continued examination (RCE) for the above-identified application.

15 *Specification*

By this paper, Applicant has amended the specification so that the summary of invention section is now more coextensive in scope with the presently allowed claims. No new matter has been entered by virtue of these amendments to the specification.

20 *Other Remarks*

Applicant hereby specifically reserves all rights of appeal, as well as the right to prosecute claims of different scope in another continuation or divisional application.

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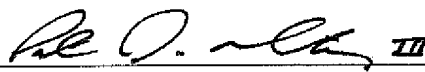
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If the Examiner has any questions or comments which may be resolved over the telephone, he is requested to call the undersigned at (858) 675-1670.

Respectfully submitted,

GAZDZINSKI & ASSOCIATES, PC

10 Dated: May 12, 2010

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